

## ABSTRACT OF THE DISCLOSURE

A method of manufacturing a semiconductor device, includes the steps of: (a) forming a first inter-level insulating film on a semiconductor substrate formed with semiconductor elements; (b) forming a contact hole through the first inter-level insulating film; (c) forming a plug made of conductive material capable of being nitrided, the plug being embedded in the contact hole; and (d) heating the semiconductor substrate in a nitriding atmosphere to nitride the plug from a surface thereof. This semiconductor device manufacture method can prevent breakdown of a plug when a capacitor is formed on the plug.